



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505T)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

45002-49

Date of Issuance:

1/18/23

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Albaugh THX-2

Name and Address of Registrant (include ZIP Code):

Tasha Lott  
Product Registration Manager, North America  
ALBAUGH, LLC  
2906 N Patterson St. Suite D  
Valdosta, GA 31602

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

*Continues page 2*

Signature of Approving Official:

Date:

1/18/23

Venus Eagle, Product Manager 01  
Invertebrate & Vertebrate Branch 3, Registration Division  
Office of Pesticide Programs

2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 45002-49.”
3. If, after formal consultation with the appropriate Service(s), additional modifications are identified for any chemical in this product in the Service’s Biological Opinion(s) for that chemical, EPA will notify Albaugh LLC in writing consistent with the terms in that Biological Opinion of any necessary required changes. Albaugh LLC must submit an application for amendment incorporating any required changes, including amended labels, consistent with the timeline specified in EPA’s notification. If Albaugh LLC fails to comply with this term, Albaugh LLC has agreed in prior written acceptance on September 26, 2022, of these terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).
4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF(s):

- Basic CSF dated 08/05/2021

If you have any questions, please contact Ralph Narain at 202-566-2853 or at [Narain.Ralph@epa.gov](mailto:Narain.Ralph@epa.gov).

Enclosure: Stamped Label

Thiophanate-methyl	GROUP	1	FUNGICIDE
Mefenoxam	GROUP	4	FUNGICIDE
Fludioxonil	GROUP	12	FUNGICIDE
Thiamethoxam	GROUP	4A	INSECTICIDE

# ALBAUGH THX-2

## [ABN: SoyStar Select ST]

A seed treatment product for use in commercial seed treatment facilities only. For use as a seed treatment to protect listed legume vegetables (including soybeans) against listed insect and disease pests.

**ACTIVE INGREDIENTS:**

Thiamethoxam: .....22.50%  
 Thiophanate-Methyl: .....4.50%  
 Mefenoxam: .....3.35%  
 Fludioxonil: .....1.10%

**OTHER INGREDIENTS:** .....68.69%  
**TOTAL:** .....100.00%

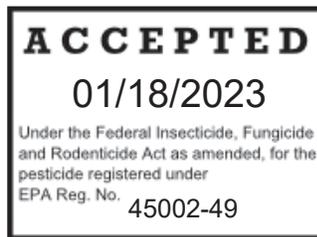
Contains 2.14 pounds thiamethoxam, 0.43 pounds thiophanate-methyl, 0.32 pounds mefenoxam, and 0.10 pounds fludioxonil per gallon.

## KEEP OUT OF REACH OF CHILDREN

# CAUTION

See [inside] booklet for [additional] [complete] [First Aid,] Precautionary Statements, Directions for Use, and [Storage and Disposal].]

FIRST AID	
<b>If Swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<p>Have the product container or label with you when calling a poison control center (888-347-6732) or doctor or going for treatment. For 24-hour emergency assistance, chemical spill, leak, fire, exposure, or accident, call CHEMTREC toll free at 1-800-424-9300.</p>	



EPA Reg. No. 45002- \_ \_ \_

EPA Est. No. \_\_\_\_\_

NET CONTENTS: \_\_\_\_ Gallons

Batch No. \_\_\_\_\_

**Manufactured By:**  
 ALBAUGH, LLC  
 1525 NE 36<sup>th</sup> Street  
 ANKENY, IA 50021

# PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Harmful if swallowed. Avoid contact with eyes, skin or clothing. Remove and wash contaminated clothing before reuse. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material: barrier laminate, butyl rubber ≥ 14 mils, natural rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or Viton® ≥ 14 mils
- Protective eyewear (face shield, goggles, or safety glasses)

Multiple Task Workers (Multiple Task Workers perform multiple tasks in one day such as mixing, bagging/filling seed containers, product application, bag sewing, and clean up) must wear:

- The PPE required for applicators and handlers listed above
- Chemical-resistant coveralls (over long sleeved shirt and long pants)

## USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. **DO NOT** reuse them.

**ENGINEERING CONTROLS:** When handlers use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.607(d)), the handler PPE requirements may be reduced or modified as specified in WPS.

## USER SAFETY RECOMMENDATIONS

**Users should:**

1. Wash hands thoroughly after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
2. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This product is highly toxic to mammals, birds, fish (freshwater and estuarine/marine) and aquatic invertebrates. For terrestrial use, **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean highwater mark. **DO NOT** contaminate water when disposing of equipment wash water or rinsate. Treated seeds exposed on soil surface may be hazardous to wildlife and birds. Cover or collect treated seeds spilled during loading and planting.

### Groundwater Advisory:

Thiamethoxam and Fludioxonil have properties and characteristics associated with chemicals detected in groundwater. These chemicals may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Mefenoxam is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

**Pollinator Advisory:** Thiamethoxam is highly toxic to bees exposed to direct treatment and effects may be possible as a result of exposure to translocated residues on blooming crops or weeds. Ensure that planting equipment is functioning properly in accordance with manufacturer specifications to minimize seed coat abrasion during planting to reduce dust which can drift to blooming crops or weeds.

### Surface Water Advisory:

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of mefenoxam from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during clean-up procedures and disposal of wastes.

## PHYSICAL AND CHEMICAL HAZARDS

**DO NOT** use or store near oxidizing agents. **DO NOT** mix or allow coming in contact with oxidizing agent. Hazardous Chemical reaction may occur.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all label directions carefully before use.

Albaugh THX-2 is only for use in commercial seed treatment facilities on the listed crops. It is to be used only with slurry or misting (liquid) seed treatment equipment. **DO NOT** use on agricultural establishments in hopper box, planter box, slurry box, or other seed treatment applications at or immediately before planting.

Albaugh THX-2 may be applied by closed or open system seed treatment application processes. **DO NOT** apply more than 215 gallons of Albaugh THX-2 per 8-hour day for seed treatments utilizing a closed system. **DO NOT** apply more than 38 gallons of THX-2 per 8-hour day for seed treatments when utilizing an open system.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE, RESTRICTIONS, AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.

## PRODUCT INFORMATION

Albaugh THX-2 is only for use in commercial seed treatment facilities. This product is a seed treatment product that protects against listed early season insects, soil-borne and seed-borne diseases of listed legume vegetables (including soybeans) and contains the active ingredients thiamethoxam, thiophanate-methyl, mefenoxam, and fludioxonil.

Thiamethoxam is a systemic seed treatment insecticide in the neonicotinoid class and protects against listed chewing and sucking insect pests.

Mefenoxam is a fungicide which protects against *Pythium*, *Phytophthora* and systemic downy mildew.

Thiophanate-methyl is a systemic fungicide which protects against *Fusarium* and *Rhizoctonia*.

Fludioxonil is a fungicide which protects against *Fusarium*, *Rhizoctonia*, and suppresses seed-borne *Sclerotinia* and *Phomopsis* spp.

## USE RESTRICTIONS

- For use in commercial seed treatment facilities only.
- **DO NOT** use on agricultural establishments in hopper box, planter box, slurry box, or other seed treatment applications at or immediately before planting.
- **DO NOT** use treated seed for feed, food, or oil purposes.
- Store treated seed away from feeds and foodstuffs.
- Treated seed must not be used for or mixed with food or animal feed or processed for oil. Seed commercially treated with this product must be labeled in accordance with all applicable requirements of the Federal Seed Act.
- **DO NOT** allow children, pets, or livestock to have access to treated seed.
- With the exception of soybeans, **DO NOT** make any soil or foliar application of products containing thiamethoxam to crops grown from seed treated with thiamethoxam. For soybeans, **DO NOT** apply a neonicotinoid insecticide within 45 days of planting seed treated with this product.
- The maximum application rate for thiamethoxam (including seed treatments, foliar applications, soil applications) is

0.266 lbs. AI per acre per calendar year. **DO NOT** apply more than 0.266 lbs. thiamethoxam ai per acre per calendar year.

- The maximum application rate for mefenoxam- and metalaxyl-containing products (including seed treatments, foliar applications, soil applications) is 12.3 lbs. AI per acre per calendar year. **DO NOT** apply more than 12.3 lbs. of active ingredients, mefenoxam and metalaxyl per acre per calendar year.
- The maximum application rate for thiophanate-methyl (including seed treatments, foliar applications, soil applications) is 0.15 lbs. AI per acre per calendar year. **DO NOT** apply more than 0.15 lbs. thiophanate-methyl per acre per calendar year.
- The maximum application rate for fludioxonil (including seed treatments, foliar applications, soil applications) is 0.875 lbs. AI per acre per calendar year. **DO NOT** apply more than 0.875 lbs. fludioxonil per acre per calendar year.
- Treated seed must be planted into the soil at a depth greater than 1 inch.
- **DO NOT** use at a rate that will result in more than 0.083 lb (37.8 grams) thiamethoxam per acre as a seed treatment application for soybean.
- Regardless of the method of application, **DO NOT** apply more than 1.25 lb mefenoxam per acre per calendar year to soybean.
- **DO NOT** not use at a rate that will result in more than 0.075 lb. (34.0 g) thiamethoxam per acre as a seed treatment for legume vegetables (other than soybeans).
- **DO NOT** graze or feed livestock on areas planted from ALBAUGH THX-2 treated chickpea seed for 30 days after planting.
- **DO NOT** graze or feed livestock on areas planted from ALBAUGH THX-2 treated soybean seed.
- **DO NOT** exceed 0.03 lbs of ai per 100 lbs of seed for all mefenoxam seed treatment uses.
- **DO NOT** apply more than 0.052 lb ai/A/calendar year of mefenoxam containing products as a seed treatment use on Dry Beans.
- **Rotational Crop Intervals:**
  - Alfalfa, Brassica (cole) leafy vegetables, buckwheat, corn, pearl millet, proso millet, popcorn, rice (dry-seeded), sorghum, teosinte, wild rice, cotton, cucurbit vegetables, dry bulb onions, fruiting vegetables, leafy vegetables, legume vegetables, mint (peppermint and spearmint), oil seed crops (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, peanuts, rapeseed seed, and safflower seed), root vegetables, strawberry, sunflowers, tobacco, and tuberous and corm vegetables may be planted 30 days from the date this seed was planted.
  - For any other crop, the minimum plant back interval is 120 days from the date seed treated with this product was planted. A cover crop other than the crops listed above that is planted for erosion control or soil improvement may be planted sooner than the 120 day interval; however, the crop may not be grazed or harvested for food or feed.
- Exposed treated seed is hazardous to birds and wildlife. Cover or incorporate spilled treated seed. Excess or leftover seed may be double-sown around the headland or buried away from bodies of water in accordance with local requirements.
- **DO NOT** store leftover treated seed where there is a chance of it becoming mixed with untreated seed.
- **DO NOT** use empty seed bags for any other purpose
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residue of pesticides remain in the ethanol by-products that are used in agronomic practice.
- Dispose of seed packaging in accordance with local requirements.
- Maximum usage when applying metalaxyl and mefenoxam containing products to the same crop with in the same season: **DO NOT** apply more than the maximum yearly total application rate for the active ingredient as stated on the label of the product containing the lowest yearly total on that crop.

## RESISTANCE MANAGEMENT

Thiamethoxam	GROUP	4A	INSECTICIDE
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For insecticide resistance management, this product contains a Group 4A insecticide. Any insect population may contain individuals naturally resistant to this product and other Group 4A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

Thiamethoxam is a systemic insecticide belonging to the neonicotinoid class of chemistry which includes nicotinic acetylcholine receptor (nAChR) agonists.

To delay insecticide resistance, take the following steps:

- Rotate the use of this product or other Group 4A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.

- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.

**For additional information on Insecticide Resistance Management:**

- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- Visit the Insecticide Resistance Action Committee (IRAC) on the web at: <http://www.irac-online.org>

Thiophanate-methyl	GROUP	1	FUNGICIDE
Mefenoxam	GROUP	4	FUNGICIDE
Fludioxonil	GROUP	12	FUNGICIDE

For fungicide resistance management, this product contains thiophanate-methyl, a Group 1 fungicide; mefenoxam, a Group 4 fungicide; and fludioxonil, a Group 12 fungicide.

Thiophanate-methyl belongs to the methyl-benzimidazole carbamate class of chemistry which disrupts  $\beta$ -tubuline assembly in mitosis. Mefenoxam belongs to the phenylamide class of chemistry which interferes with fungal RNA synthesis. Fludioxonil belongs to the phenylpyrrole class of chemistry which interferes with osmotic signal transduction.

Fungal populations may contain individuals naturally resistant to Group 1, 4, or 12 fungicides and if used repeatedly in the same fields, then resistant members may eventually dominate the population. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies such as alternation with fungicides with a different mode of action and/or tank mixes established for the crop and use area.

Use should be based on an IPM program that includes field sanitation, scouting, historical information related to pesticide use, and crop rotation. The IPM program should also consider cultural, biological, and other chemical control practices.

Albaugh encourages responsible product stewardship to ensure effective long term control of the fungal diseases on this label.

**For additional information on Fungicide Resistance Management:**

- Contact your local extension specialist or certified crop advisor
- Visit the Fungicide Resistance Action Committee (FRAC) on the web at: <http://www.frac.info>

## MIXING INSTRUCTIONS

Mix thoroughly before use or use entire container at one time.

**TANK MIXING:** All tank mixes should be pre-tested to determine physical compatibility between formulations. Follow the most restrictive precautions and limitations of all products used in mixtures. **DO NOT** tank mix with any product that contains a prohibition against tank mixing.

It is the pesticides user's responsibility to ensure that all products are registered for intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must

follow the most restrictive directions and precautionary statements of each product in the mixture.

**IMPORTANT:** Always re-circulate this product thoroughly before using. The typical density of this product is 9.5 lbs per gallon.

Apply this product as a water-based slurry utilizing standard slurry seed treatment equipment which provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of disease control. Thoroughly mix the specified amount of this product into the required amount of water or liquid inoculant for the slurry treater and dilution rate to be used.

Certain crops require addition of inoculants when the seed is treated or planted. This product is compatible with several liquid inoculant products. Consult the maker of the inoculant product and an Albaugh representative for directions before applying this product with inoculants.

Under certain disease conditions, additional amounts of fungicides may be required. When needed, apply additional metalaxyl or mefenoxam containing product and fludioxonil containing product according to the label **USE**

**SPECIFICATIONS.** Other tank mix partners may be used with this product however, the user must consider the use rate, formulation, seed and crop safety factors and compatibility of each product to be mixed when determining the total application volume.

The total application volume must be sufficient to provide desired level of coverage. Dilution is typically done with water or liquid inoculants. The minimum slurry volume to achieve adequate coverage is 4.0 fluid ounces per 100 pounds of seed. More diluent may be required to obtain complete coverage.

Continuous agitation or mixing of the slurry mixture is necessary to prevent settling out of the solution.

Allow seed to dry before bagging.

This product contains an EPA approved dye/colorant that imparts an unnatural color to the seed as required by the Federal Seed Act.

This product also contains a polymer to improve the adherence of seed treatment components to the seed.

## SEED TREATMENT

### TARGET INSECTS

Early season protection against injury by aphids, bean leaf beetle, grape colaspis, leaf miners, leaf hoppers, Mexican bean beetle, seed corn maggot, three-cornered alfalfa hopper, thrips, white grubs, and wireworm.

This product also protects against pea leaf weevil.

### TARGET DISEASES

Protection against damping-off, seed, and seedling diseases due to *Pythium*, *Phytophthora*, *Fusarium*, and *Rhizoctonia* species. This product also suppresses seed-borne *Sclerotinia* and *Phomopsis* species.

### DRY BEANS, SUCCULENT (SNAP) BEANS

(*Cicer arietinum* (chickpea, garbanzo bean); *Lupinus* spp. (sweet lupine, white sweet lupine, white lupine, and grain lupine). *Phaseolus* spp. (kidney bean, lima bean, mung bean, navy bean, pinto bean, snap bean, and waxbean); *Vicia faba* (broad bean, fava bean); *Vigna* spp. (asparagus bean, blackeyed pea and cowpea))

#### RATE OF THIS PRODUCT

Fl. Oz. / 100 lb. of seed	Active Ingredient	lb AI/100 lbs of seed	Grams AI / 100 lbs of seed	Grams AI / 100 kg of seed
3.0	thiamethoxam	0.05	22.68	50.0
	thiophanate-methyl	0.01	4.54	10.0
	mefenoxam	0.008	3.63	7.5
	fludioxonil	0.002	0.91	2.3

#### REMARKS

**WHEN TO ADD ADDITIONAL metalaxyl or mefenoxam product** - If target fields have a history of *Pythium* damping off and systemic downy mildew, add additional metalaxyl or mefenoxam product. The additional metalaxyl or mefenoxam product may reduce compatibility with some *rhizobia* inoculants. Consult with the maker of *rhizobia* inoculants before adding the additional metalaxyl or mefenoxam product.

#### RESTRICTIONS

- This product is for use in commercial seed treatment facilities only.
- **DO NOT** apply more than 215 gallons of Albaugh THX-2 per 8-hour day for seed treatments utilizing a closed system. **DO NOT** apply more than 38 gallons of Albaugh THX-4 per 8-hour day for seed treatments utilizing an open system.
- **DO NOT** apply a neonicotinoid insecticide within 45 days of planting seed treated with Albaugh THX-2.
- Maximum one application per calendar year.
- This product must not be tank mixed with any pesticide unless physical compatibility and phytotoxicity tests have been completed and proved to be satisfactory.
- **DO NOT** use at a rate that will result in more than 0.075 lb. (34.0 g) thiamethoxam per acre as a seed treatment for legume vegetables (other than soybeans).
- Regardless of the method of application, **DO NOT** apply more than 0.875 lb (396.9 grams) fludioxonil per acre per calendar year for soybean.
- Regardless of type of application, **DO NOT** apply more than 0.266 lb (120.7 grams) thiamethoxam per acre per calendar year.
- Regardless of type of application, **DO NOT** apply more than 0.15 lb (68.0 grams) thiophanate-methyl per acre per calendar year.
- Regardless of the method of application, **DO NOT** apply more than 12.3 lb of active ingredients, mefenoxam and metalaxyl, per acre per calendar year
- **DO NOT** exceed 0.03 lbs of ai per 100 lbs of seed for all mefenoxam seed treatment uses.
- **DO NOT** apply more than 0.052 lb ai/A/calendar year of mefenoxam containing products as a seed treatment use on Dry Beans.
- **CA RESTRICTION:** Seed and Pod Vegetables seed treated in California must be destined for planting in states other than California and is not to be planted in California.
- **DO NOT** graze or feed livestock on areas planted from ALBAUGH THX-2 treated chickpea seed for 30 days after planting.

**SOYBEANS**

**RATE OF THIS PRODUCT**

Use Rate based on 3000 seeds / lb (150,000 seeds / 50 lb bushel)

Fl. Oz. /			ml / 1,000 seeds	Active Ingredient	lb AI / 100 lb of seed	Grams AI / 100 lb of seed	Grams AI / 100 kg of seed	mg AI / Seed
100 lbs seed	1,000 Seeds	140,000 seeds						
3.0	0.01	1.4	0.3	thiamethoxam	0.05	22.68	50.0	0.0758
				thiophanate-methyl	0.01	4.54	10.0	0.0152
				mefenoxam	0.008	3.63	7.5	0.0113
				fludioxonil	0.002	0.91	2.3	0.0035

**REMARKS**

**WHEN TO ADD ADDITIONAL metalaxyl or mefenoxam product:** If target fields have a history of high *Phytophthora* pressure, add additional metalaxyl or mefenoxam product. The additional metalaxyl or mefenoxam product may reduce compatibility with some *rhizobia* inoculants. Consult with the maker of *rhizobia* inoculants before adding the additional metalaxyl or mefenoxam product.

**IMPORTANT:** To maintain mg ai / seed, adjust fluid ounces / 100 lbs. of seed in proportion to the actual seed count / lb. compared to the standard number of seeds / lb. for that crop; fluid ounces per number of seeds (i.e., 1000, 80,000, 140,000) does not need to be adjusted. For example, if there are actually 2800 soybean seeds / lb. use:  $2800 \div 3000 \times 3.0 = 2.8$  fl. oz. / 100 lbs. of seed.

**RESTRICTIONS**

- This product is for use in commercial seed treatment facilities only.
- **DO NOT** apply more than 215 gallons of Albaugh THX-2 per 8-hour day for seed treatments utilizing a closed system. **DO NOT** apply more than 38 gallons of Albaugh THX-4 per 8-hour day for seed treatments utilizing an open system.
- **DO NOT** apply a neonicotinoid insecticide within 45 days of planting seed treated with Albaugh THX-2.
- Maximum one application per calendar year.
- This product must not be tank mixed with any pesticide unless physical compatibility and phytotoxicity tests have been completed and proved to be satisfactory.
- **DO NOT** use at a rate that will result in more than 0.083 lb (37.8 grams) thiamethoxam per acre as a seed treatment application for soybeans
- Regardless of the method of application, **DO NOT** apply more than 0.875 lb (396.9 grams) fludioxonil per acre per calendar year for soybean.
- Regardless of type of application, **DO NOT** apply more than 0.266 lb (120.7 grams) thiamethoxam per acre per calendar year.
- Regardless of type of application, **DO NOT** apply more than 0.15 lb (68.0 grams) thiophanate-methyl per acre per calendar year.
- Regardless of the method of application, **DO NOT** apply more than 1.25 lb (567.0 grams) mefenoxam per acre per calendar year for soybean.
- **DO NOT** exceed 0.03 lbs of ai per 100 lbs of seed for all mefenoxam seed treatment uses.
- **DO NOT** apply more than 0.052 lb ai/A/calendar year of mefenoxam containing products as a seed treatment use on Soybeans.
- **DO NOT** graze or feed livestock on areas planted from ALBAUGH THX-2 treated soybean seed.

## SEED BAG LABELING REQUIREMENTS

Seed commercially treated with this product must be labeled in accordance with all applicable requirements of the Federal Seed Act. The user of this product is responsible for ensuring that the seed bag meets all requirements under the Federal Seed Act.

THE FEDERAL SEED ACT REQUIRES THAT BAGS CONTAINING TREATED SEEDS BE LABELED WITH THE FOLLOWING STATEMENTS:

- This seed has been treated with ALBAUGH THX-2, EPA Reg. No. 45002-UO (thiamethoxam, thiophanate-methyl, mefenoxam, and fludioxonil)
- **DO NOT** use for feed, food, or oil purpose.

THE US ENVIRONMENTAL PROTECTION AGENCY REQUIRES THE FOLLOWING STATEMENTS ON BAGS CONTAINING SEEDS TREATED WITH ALBUAGH THX-2, EPA Reg. No. 45002-UO (thiamethoxam, thiophanate-methyl, mefenoxam, and fludioxonil)

**Groundwater Advisory:** Thiamethoxam and Fludioxonil have properties and characteristics associated with chemicals detected in groundwater. These chemicals may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Mefenoxam is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

**Pollinator Advisory:** Thiamethoxam is highly toxic to bees exposed to direct treatment and effects may be possible as a result of exposure to translocated residues on blooming crops or weeds. Ensure that planting equipment is functioning properly in accordance with manufacturer specifications to minimize seed coat abrasion during planting to reduce dust which can drift to blooming crops or weeds.

**Surface Water Advisory:** This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of mefenoxam from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

- The maximum application rate for thiamethoxam (including seed treatments, foliar applications, soil applications) is 0.266 lbs. AI per acre per calendar year. **DO NOT** apply more than 0.266 lbs. thiamethoxam ai per acre per calendar year.
- The maximum application rate for mefenoxam- and metalaxyl-containing products (including seed treatments, foliar applications, soil applications) is 12.3 lbs. AI per acre per calendar year. **DO NOT** apply more than 12.3 lbs. of active ingredients, mefenoxam and metalaxyl per acre per calendar year.
- Store away from feeds and foodstuffs.
- Wear long-sleeved shirt, long pants, shoes plus socks, chemical resistant gloves made of any waterproof material: barrier laminate, butyl rubber ≥ 14 mils, natural rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or Viton® ≥ 14 mils, and protective eyewear (face shield, goggles, or safety glasses when handling treated seed).
- Treated seed must be planted into the soil at a depth greater than 1 inch.
- **DO NOT** contaminate bodies of water when disposing of planting equipment wash water.
- With the exception of soybeans, **DO NOT** make any soil or foliar application of products containing thiamethoxam to crops grown from seed treated with thiamethoxam. For soybeans, **DO NOT** apply a neonicotinoid insecticide within 45 days of planting seed treated with this product.
- Exposed treated seed is hazardous to birds and wildlife. Cover or incorporate spilled treated seeds. Excess or leftover seed may be double-sown around the headland or buried away from bodies of water in accordance with local requirements.
- **DO NOT** use at a rate that will result in more than 0.083 lb (37.8 grams) thiamethoxam per acre as a seed treatment application for soybean.
- Regardless of the method of application, **DO NOT** apply more than 1.25 lb mefenoxam per acre per calendar year

to soybean.

- **DO NOT** not use at a rate that will result in more than 0.075 lb. (34.0 g) thiamethoxam per acre as a seed treatment for legume vegetables (other than soybeans).
- **DO NOT** graze or feed livestock on areas planted from ALBAUGH THX-2 treated chickpea seed for 30 days after planting.
- **DO NOT** graze or feed livestock on areas planted from ALBAUGH THX-2 treated soybean seed.
- **DO NOT** exceed 0.03 lbs of ai per 100 lbs of seed for all mefenoxam seed treatment uses.
- **DO NOT** apply more than 0.052 lb ai/A/calendar year of mefenoxam containing products as a seed treatment use on Dry Beans.
- Dispose of seed packaging in accordance with local requirements.
- **DO NOT** contaminate water bodies when disposing of planting equipment wash water.
- **DO NOT** allow children, pets, or livestock to have access to treated seed.
- **Rotational Crop Intervals:**
  - Alfalfa, Brassica (cole) leafy vegetables, buckwheat, corn, pearl millet, proso millet, popcorn, rice (dry-seeded), sorghum, teosinte, wild rice, cotton, cucurbit vegetables, dry bulb onions, fruiting vegetables, leafy vegetables, legume vegetables, mint (peppermint and spearmint), oil seed crops (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, peanuts, rapeseed seed, and safflower seed), root vegetables, strawberry, sunflowers, tobacco, and tuberous and corm vegetables may be planted 30 days from the date this seed was planted.
  - For any other crop, the minimum plant back interval is 120 days from the date seed treated with this product was planted. A cover crop other than the crops listed above that is planted for erosion control or soil improvement may be planted sooner than the 120 day interval; however, the crop may not be grazed or harvested for food or feed.
- **For Soybeans:** This seed has been treated with   X   lbs thiamethoxam per        lbs of seed [ or   X   mg thiamethoxam per seed]. This seed has been treated with   X   lbs mefenoxam per        lbs of seed [ or   X   mg mefenoxam per seed]. This seed has been treated with   X   lbs thiophanate-methyl per        lbs of seed [ or   X   mg thiophanate-methyl per seed]. This seed has been treated with   X   lbs fludioxonil per        lbs of seed [ or   X   mg fludioxonil per seed].
- **For Dry Beans, Succulent (Snap) Beans:** This seed has been treated with   X   lbs thiamethoxam per        lbs of seed [ or   X   mg thiamethoxam per seed]. This seed has been treated with   X   lbs mefenoxam per        lbs of seed [ or   X   mg mefenoxam per seed]. This seed has been treated with   X   lbs thiophanate-methyl per        lbs of seed [ or   X   mg thiophanate-methyl per seed]. This seed has been treated with   X   lbs fludioxonil per        lbs of seed [ or   X   mg fludioxonil per seed].
- Maximum usage when applying metalaxyl and mefenoxam containing products to the same crop with in the same season: **DO NOT** apply more than the maximum yearly total application rate for the active ingredient as stated on the label of the product containing the lowest yearly total on that crop
- **DO NOT** store leftover treated seed where there is a chance of it becoming mixed with untreated seed.
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residue of pesticides remain in the ethanol by-products that are used in agronomic practice.
- Follow planter manufacture specifications for use of talc or other additives at planting. Seed must be completely dry before adding to planter.
- **DO NOT** use empty seed bags for any other purpose.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office.

### CONTAINER HANDLING:

[Plastic HDPE containers less than or equal to 5 gallons]

Non-refillable rigid plastic container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

[Plastic HDPE containers greater than 5 gallons]

Non-refillable rigid plastic container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.**

[Optional Marketing Graphic]



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## CONDITIONS OF SALE, WARRANTY DISCLAIMER AND LIMITATION OF LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened and the purchase price will be refunded.

ALBAUGH, LLC and the Seller offer this product subject to the following Conditions of Sale, Warranty Disclaimer and Limitation of Liability, and by purchasing and using this product, Buyer and Users accept such Conditions of Sale, Warranty Disclaimer and Limitation of Liability. No employee or agent of ALBAUGH, LLC or the Seller is authorized to modify the terms of these Conditions of Sale, Warranty Disclaimer and Limitation of Liability unless in writing and signed by a duly authorized representative of ALBAUGH, LLC.

The **DIRECTIONS FOR USE** of this product are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of ALBAUGH, LLC or the Seller. All such risks shall be assumed by the Buyer. **WITHOUT LIMITATION, THE BUYER SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.**

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**LABEL HISTORY**  
(Not part of final printed label)

<b>File Name</b>	<b>Version Mark</b>	<b>Comment</b>
045002-000##.20210804.DRAFT (THX-2)	080421	Section 3 Draft Label
045002-000UO.20220916.DRAFT	091622	(e) Label Revisions
045002-000UO.20220926.DRAFT	092622	(e) Label Revisions
045002-000UO.20221109.DRAFT	110922	(e) Label Revisions
045002-000UO.20221122.DRAFT	112222	(e) Label Revisions
045002-000UO.20221129.DRAFT	112922	(e) Label Revisions
045002-000UO.20230117.DRAFT	011723	(e) Label Revisions